

SUMMARY OF MATERIALS INSPECTED GENERAL SECTION 8

8.1 GENERAL.

- **8.1.1** Federal regulations require the department to submit a certification, upon completion and acceptance of a project, stating that the materials incorporated into the work substantially met the requirements of the contract. In addition, the department is required to cite any shortages of material inspection or circumstances of acceptance of materials which were used and did not receive normal inspection. The Materials unit has been designated by the department to be the certifying agent.
- **8.1.2** It is the intent of the specifications that all materials be properly inspected and reported for a specific project. However, it is realized that the total inspected quantity of a specific material might not always be attained. These instances should normally be rare. If shortages of inspected and reported quantities occur, the district Operations Engineer should determine if <u>substantial compliance</u> has been met. Substantial compliance indicates that there is a reasonable tolerance that could be applied. It has been determined that the reasonable tolerance would be a maximum of 10 percent, however, this tolerance should only be used judicially, dependent upon the type and quantity of material represented.
- **8.1.3** Accordingly, to comply with the requirements of the Federal Highway Administration and to ascertain that the materials have been properly inspected and reported, the procedures set forth in this section should be followed.

8.2 PROCEDURE.

- **8.2.1** Upon completion of a project, a statement attesting that all materials incorporated into the project were properly and adequately inspected is to be submitted to the State Construction and Materials Engineer. The statement shall include any exceptions as to material shortages or lack of inspection.
- **8.2.2** A copy of the desired statement is shown as Exhibit 8-A of this Section and is to be signed by the District Engineer or district Operations Engineer. The signature indicates that all data submitted has been reviewed by individuals reasonably familiar with the project and the data is correct and complete. This statement is to be accompanied by a Summary Packet as detailed in this section.
- **8.2.3** These documents should be completed and forwarded within four weeks for small projects or six weeks for large projects, from the date final quantities for the project have been established. The Resident Engineer's staff will enter a Key Date in SiteManager to indicate that data required for the summary is ready for use and that no additional changes will be made, including Change Orders. If for some reason the summary cannot be completed and forwarded within this time frame, the State Construction and Materials Engineer should be notified. A small contract is defined as having less than 40 bid items and an original bid amount of less than \$1,000,000.00.
- **8.2.4 SUMMARY PACKET OF MATERIALS INSPECTED.** A summary packet of materials inspected is to be submitted for each project. The summary packet, as prepared through SiteManager and Impromptu, is to include the following components:



- **8.2.4.1** The standard cover letter indicating that the attached information has been reviewed and is correct. (Exhibit 8-A)
- **8.2.4.2** Material Summary.IMR, a standard Impromptu report (Exhibit 8-B). This report shows the bid quantity plus any change order quantities and multiplies it by the conversation factor to indicate the Represented Quantity as the amount that requires inspection.
- **8.2.4.3** Sampling Checklist, a standard SiteManager report. This report shows the amount of the bid item and the number of samples taken to meet the sampling requirement. (Exhibit 8-C)
- **8.2.4.4** MixDesignData for Asphalt.IMR, a standard Impromptu report. This report takes the Mix ID and reports each component and its producer, listing them by material code. (Exhibit 8-D)
- **8.2.4.5** MixDesignData for Concrete.IMR, a standard Impromptu report. This report takes the PCC Mix ID information and reports each component, the producer supplier, and material information for a specific contract. (Exhibit 8-E)
- **8.2.4.6** Mixing Facility Components. IMR, a standard Impromptu report, is prepared for each mixing facility (asphalt or concrete) used on the contract. This lists the rationale for acceptance of each of the components used in the mix by producer and material code. (Exhibit 8-F)

To choose dates for creating report, select "Beginning date (YYYYMMDD) of calendar year" the aggregate was produced, e.g., 20000101. Then select the "date (YYYYMMDD) of first use in designated calendar year." If work on the job continues longer than a year, it may be necessary to create a Mixing Facility Component, IMR for each year of construction. To get facilities on this report, when reporting sampling at the quarry, make sample record and designate mixing facility on the other tab.

- **8.2.4.7** Summary of IAS.IMR, a standard Impromptu report. This report lists each IAS test taken to determine if they meet the requirements as set out in FS-10. (Exhibit 8-G)
- **8.2.4.8** Summary of FAST.IMR, a standard Impromptu report. This report lists each FAST test taken to determine if they meet the requirements as set out in FS-15. (Exhibit 8-H)
- **8.2.4.9** Attachment page(s) as necessary to explain any exceptions to standard policy, or for issues not adequately covered by the standard reports.
- **8.2.4.10** The 2AA sheets, a statement that the 2AA sheet does not apply, or the name and phone number of the individual responsible for the 2AA sheet.
- **8.2.5** It is intended that the required quantity be covered by proper and adequate inspection. If the quantity inspected and reported is less than the required quantity, a notation is to be made on the summary, or attached to the summary on a separate sheet, describing the basis of acceptance of the material not covered by proper inspection.



8.2.6 If a material was used and not properly inspected, an explanation as to the basis of acceptance for use is to be shown on the summary or on an attached sheet. Any correspondence relative to the basis of acceptance should be attached to the summary. It is important that complete details be furnished as to the basis of acceptance.

8.3 COMBINATION PROJECTS.

- **8.3.1** Combination projects may be shown on the same summary providing the contract quantities and quantities required for each project in the combination are listed and that Final Change Order date of the projects included fall within the 4 or 6 week period.
- **8.4 DISTRIBUTION.** Distribution of the statement, summary of materials inspected packet and substantiating documents shall be as follows:

State Construction and Materials Engineer Resident Engineer



MEMORANDUM



Missouri Department of Transportation District __ Operations Location

| то: | State Construction and Materials Engineer |
|----------|---|
| FROM: | District Engineer or Operations Engineer |
| DATE: | |
| SUBJECT: | Construction and Materials Materials Certification |
| | Contract: Route: Job. No. County: |

All of the materials, except those listed below, were properly covered by reports of field inspections and tests, by laboratory tests, or by manufacturers certifications supported by field inspections. The items listed below were accepted under the conditions noted.

Copies of reports covering approval of the materials are on file in our office or have been recorded using SiteManager.

A copy of our summary of inspections of material used on this project, and supporting documentation, is attached for your file.

EXHIBIT 8-A



| | late riski Serma a sylmin Sedansi Dr. CS. CTIE | | Material Summary for the | | | the | 991022-702 | | | Date: 07/19/2000 | | | | |
|----------|---|---------|---|------------------------|--------------|---------------------|----------------|----------------------|-------------------|------------------|-------------------------|-------------------|-----------------------------|--------------------------------|
| Pri | mary | Job: | J7L0006A | | Ro | ute: 126/71 | E OUTE | R RD. | Primary | County | BARTO | N | | |
| Project | Line | ten | Description + Supplemental | Bid + C.O. Quantity | Bid Units | Material Code | Conv Factor | Material Quantity | Material Units | Sample ID | Represented Quantity | Total Reported | Over/Linder Rptd by Line | Over/Linder Rptd by Project |
| J7L00084 | 0010 | 4021110 | ASPHALT BINDER (SURFACE LEVELING) | 286.3 | TONS | 1.015 A CP G . 6422 | 1.0000 | 286.30 | lions | 07MA1124 | 286.300 | 286,300 | 0,00 | 0.00 |
| | 0020 | 4022010 | MNERAL AGGREGATE (SURFACE LEVELING) | 4737 | TONS | 0.4025LPW9L | 1,0000 | 4737.00 | tens | 07MA1125 | 4736.320 | 4736.320 | -0.58 | -0.50 |
| | 0030 | 4071006 | TACK COAT | 2110 | GAL | 1016EASE1 | 1.0000 | 2110.00 | gallens | 07MA1122 | 4826,000 | 4826,000 | 2,716.00 | 2,716.00 |
| | 0050 | 6161006 | CONSTRUCTION SIGNS | 288 | SQFT | 1041CS | 1.0000 | 288.00 | sq. feet | 07MA1191 | 289.000 | 288,000 | 0.00 | 0.00 |
| | 0060 | 6206065 | TEMPORARY RAISED PAVENENT MARKER | 970 | EA | 1048PMTPRSYL | 1.0000 | 970.00 | each | 07MA1123 | 970.000 | 970.000 | 0.00 | 0.80 |
| J7L00050 | 0070 | 4021110 | ASPHALT BINDER (SURFACE LEVELING) PG 84-22 | 31.7 | TONS | 1015ACPG.6422 | 1.0000 | 11.70 | tons | 07MA1124 | 9,500 | 9,500 | -2.20 | -2.00 |
| | 0080 | 4022010 | MINERAL AGGREGATE (SURFACE LEVELING) PG64-22 | 193 | TONS | 0402SLPMSL | 1.0000 | 193.00 | tone | 07MA1125 | 157.000 | 157.000 | -36.00 | -38,00 |
| | 0090 | 4071005 | TACK COAT | 150 | GAL | 1015EASS1 | 1,0000 | 150.00 | gallons | 07MA1122 | 200,000 | 200,000 | 50.00 | 50.00 |
| | 0110 | 6161005 | CONSTRUCTION SIGNS | 176 | SGFT | 1041CS | 1,0000 | 176.00 | sq. feet | 07WA1151 | 176.000 | 178,000 | 0.00 | 0.00 |
| | 0120 | 6208065 | TEMPORARY RAISED PAVEMENT MARKER | 39 | EA | 1048PMTPRSVL | 1.0000 | 39.00 | each | 07MA1123 | 39,000 | 39.000 | 0.00 | 0.00 |

Records that have been marked Rejected or Void are not included in this report. Values shown in the Over/Under Ripki by Project column repeat for every occurrence of that material code.

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EXHIBIT 8-B



BPT ID: BNMSMPCL DATE: 07/19/2000 Missouri USER: kobal Department of Transportation PAGE: 1 of 1 Sampling Checklist Contract ID: 991022-702 Federal/State Project : 991022-702 Location: From the Kennas State Line East to Route 43 Near Nashville Type of Work: ASPHALT PROJE County: BARTON Route: 126/71 E OUTER RD. Vendor ID: 0010640 Bid + CO Quantity Installed Quantity Line Item Item Code Unit Project Item Description Unit | Smpl Type | Acpt Mthd Material Prod/Supp Test Meth Cur Qty Tot Taken Tot Comp Tot Req Req Qty Name 17L0006A 286,300 0010 4021110 ASPHALT BINDER (SURFACE LEVELING) PG 64-21 TONS 296.3 1015ACPG . € PG 64-22 Performence Gr Asph Binde E042 DPRD CETE 3176700025 1 0 17L0006A 8020 4022010 MINERAL AGGREGATE (SURFACE LEVELING) PGI. TONS 4,737,000 4736,32 0482SLPMS1 Plant Mix for Surface Leveling. E042 DPRD SATE 3176700025 0 0 0030 4071 005 2,110.000 2110 TACK COAT GAL 1015EA ... St SS-1 Emulsified Asphalt E018 3177100227 17L0008A 0050 288,000 288 CONSTRUCTION SIGNS SGFT E039 CERT 3178500154 0 1041CS Construction Sign DPRO 1 0 17L0005A 6208065 970.000 0060 TEMPORARY RAISED PAVEMENT MARKER EA 970 1048PMTPR Temporary Raised Yellow Pavement N E008 3175700025 0 DERD CERT П 1 J7L00068 ASPHALT BINDER (SURFACE LEVELING) PG 64-2; TONS 11,780 9.5 0070 4021110 1015ACPG. 6 PG 64-22 Performance Gr. Asph. Birde E042 0 CETE 1 0 DPRD 3176700025 J7L00068 0000 4022010 MINERAL AGGREGATE (SURFACE LEVELING) PGI TONS 193,000 157 04025LPMSI Plant Mix for Surface Leveling E042 0 DPRD SATE 3176700025 1 0 171,00068 0090 4071005 TACK COAT 150,000 147 CERT 3177100227 ---1015EA....S: SS-1 Emulsified Asphalt E018 DPRO 1 0 0 17L00058 0110 6161005 CONSTRUCTION SIGNS SQFT 176,000 167 3178500154 ---104105 Construction Sign DPRD CERT 1 0 17L00058 0120 6208065 TEMPORARY RAISED PAVEMENT MARKER EA 39,000 39 1048PMTPR | Temporary Raised Yellow Pavement N E008 3176700025 ---0 DPRD CERT

EXHIBIT 8-C



MitxDesign DatarbrAsphalt.imr Reulsed 12/27/2001

Asphalt Mix Design Data for Contract: 000616-105

Date: 02/06/2002

| Mix ID | Producer | Producer Name | Material Code | Material | Percent |
|---------------|-----------|---|---------------|--|---------|
| SP125 00-302 | 304200012 | Tosco (Equilon) (Shell), Kansas City | 1015ACPG7022 | PG 70-22 Performance Graded Asph Binc | 5.6 |
| | 303061711 | Martin Marietta, Pattonsburg | 1002MSSPMSLS | Mfg Sand (Limestone) for Superpave | 37.0 |
| | 303061711 | Martin Marietta, Pattonsburg | 100204SPLS | 3/8" (9.5mm) Max Size LS for Superpave | 36.0 |
| | 303061711 | Martin Marietta, Pattonsburg | 100207SPLS | 3/4" (19.0 mm) Max Size LS for SP | 26.0 |
| | 303240021 | Mississippi Lime #2 Quarry Ste. Genevieve | 1002HLACHL | Hydrated Lime for Asphalt Concrete | 1.0 |
| SP125 01-113 | 303000032 | Marathon Oil, Meredosia Term | 1015ACPG7022 | PG 70-22 Performance Graded Asph Binc | 5.8 |
| | 303310011 | Missouri Rock, Orrick Quarry | 100207SPLSE | 3/4" Max Size Limestone for Superpave | 45.8 |
| | 317670301 | APAC-Missouri (Limpus - Harrisonville Qy) | 100204SPLSE | 3/8" (9.5 mm) Max Size LS for SuperPave | 20.6 |
| | 317670301 | APAC-Missouri (Limpus - Harrisonville Qy) | 1002MSSPMSLS | Mfg Sand (Limestone) for Superpave | 17.0 |
| | 300400031 | Bingham S&G #3, Chat, Atlas | 1002MSACMSCTM | Mod Grad Mfg Sand (Chat) for Asphalt Co | 10.0 |
| | 301980011 | Heckett Slag | 100205ACSS | 1/2" Max Size Steel Slag for Asphalt Con | 6.0 |
| | 300170401 | Mississippi Lime Co, Springfield Plant (Ash Gro | 1002HLACHL | Hydrated Lime for Asphalt Concrete | 0.6 |
| | 319960012 | Textile Rubber & Chemical Co. | 0403BXAS | USE 1071-Bit Anti-Strip Agent (Expermtl) | 1.0 |
| SP190 00-301I | 304200012 | Tosco (Equilon) (Shell), Kansas City | 1015ACPG7022 | PG 70-22 Performance Graded Asph Binc | 5.2 |
| | 303061711 | Martin Marietta, Pattonsburg | 1002MSSPMSLS | Mfg Sand (Limestone) for Superpave | 38.0 |
| | 303061711 | Martin Marietta, Pattonsburg | 100207SPLS | 3/4" (19.0 mm) Max Size LS for SP | 27.0 |
| | 303061711 | Martin Marietta, Pattonsburg | 100204SPLS | 3/8" (9.5mm) Max Size LS for Superpave | 21.0 |
| | 303061711 | Martin Marietta, Pattonsburg | 100210SPLS | 1" (25.0 mm) Max Size LS for Superpave | 13.0 |
| | 303240021 | Mississippi Lime #2 Quarry Ste. Genevieve | 1002HLACHL | Hydrated Lime for Asphalt Concrete | 1.0 |

EXHIBIT 8-D



MkDesign DatabinConcrete.imr
Reuked 01/23/02
Concrete Mix Design Data
Contract: 000616-105

| Mix ID | P/S Code | P/S Name | Material Code | Material Name | Mass |
|--------|--|--|------------------------------------|--|-----------------------------------|
| 01021 | 3061700111 3021300114 3013405234 390000013X | Kenny Stoner Sand Company Hunt Midwest, Randolph Holoim (Holnam) Cement, N. Kansas City Water Supplier - Tested or Publicly Regula | 1005GDCMLS 1019PCT1 | Class B Natural Sand for Concrete Grad D Limestone for Concrete Masonr Type I Portland Cement • Water | 1251 1858 584 300 |
| 01022 | 3061700111 3030616511 3196500136 3001701037 390000013X | Kenny Stoner Sand Company Martin Marietta #165, Gallatin ISG Resources, Cincinnati (Thomas Hill) Ash Grove Cement, Chanute,KS Water Supplier - Tested or Publicly Regula | 1005GFCPLS 1018FLCC 1019PCT1 | Class B Natural Sand for Concrete Grad F Limestone for PCCP Class C Fly Ash Type I Portland Cement Water | 1057 1769 97 550 286 |
| 01023 | 3061700111 3030616511 3001701037 390000013X | Kenny Stoner Sand Company Martin Marietta #165, Gallatin Ash Grove Cement, Chanute,KS Water Supplier - Tested or Publicly Regula | 1005GFCPLS 1019PCT1 | Class B Natural Sand for Concrete Grad F Limestone for PCCP Type I Portland Cement Water | 1062 1776 650 288 |
| 01024 | 3061700111 3030616511 3001701037 390000013X | Kenny Stoner Sand Company Martin Marietta #165, Gallatin Ash Grove Cement, Chanute,KS Water Supplier - Tested or Publicly Regula | 1005GFCPLS 1019PCT1 | Class B Natural Sand for Concrete Grad F Limestone for PCCP Type I Portland Cement Water | 1060 1731 671 297 |
| 01025 | 3061700111 3030616511 3196500136 3001701037 390000013X | Kenny Stoner Sand Company Martin Marietta #165, Gallatin ISG Resources, Cincinnati (Thomas Hill) Ash Grove Cement, Chanute,KS Water Supplier - Tested or Publicly Regula | 1005GFCPLS 1018FLCC 1019PCT1 | Class B Natural Sand for Concrete Grad F Limestone for PCCP Class C Fly Ash • Type I Portland Cement • Water | 1066 1706 101 574 299 |

EXHIBIT E



Mixing Facility Components.imr Revised 01/10/2000

Date: 07/19/2000

Mixing Facility Components for 3176700025 Joplin

| Sample ID | Material Code | al Code Material Full Name | | Prod Code | Producer Supplier Name |
|-----------|---------------|---|----------|------------|---------------------------------|
| 08D3B238 | 100204SPLSE | 3/8" (9.5 mm) Max Size LS for SuperPavi | 20000630 | 3018800118 | Springfield Underground |
| 07TMN151 | 100207ACLS | 3/4" (19 mm)Max Size LS for Asphalt Co | 20000314 | 3023600117 | Joplin Stone |
| 07SRJ089 | 100210BBLS | 1" (25mm) Max Size Limstone for Bit Bas | 20000523 | 3023600117 | Joplin Stone |
| 07TMN155 | 1002CAACCT | Chat for Asphalt Concrete | 19990908 | 3123900317 | Bedrock - Vogie |
| 08G1W043 | 1002HLACHL | Hydrated Lime for Asphalt Concrete | 20000414 | 3001704018 | Ash Grove #40, Springfield Lime |
| 07TMN153 | 1002MSACMSLS | Mfg Sand (Limestone) for Asphalt Concre | 20000314 | 3023600117 | Joplin Stone |
| 07TMN154 | 1002SGACLS | Limestone Screenings for Asphalt Concre | 20000314 | 3023600117 | Joplin Stone |

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| Summery of (ASJmr | Summary of IAS Testing | | | | | | |
|-------------------|---|----------------------|--------------|---------------------------|----|--|--|
| | Missouri Department of Transportation - Materials | | | | | | |
| Contract: | Project: Route: County: | | | | | | |
| Material | Test Description | Sample D Report Date | Station Offs | set Sample Date Statu | JS | | |
| | | | | | | | |

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Note: This exhibit indicates a project not requiring IAS testing. The form shown is submitted regardless whether IAS testing is required.

EXHIBIT 8-G



| Sameran, of FOST free Revision: 366 (1634 | Summary of FAST Testing | | | | | |
|--|---|-----------------------|---------|--------|-------------|--------|
| | Missouri Department of Transportation - Materials | | | | | |
| Contract | Project: | Route: | | C | | |
| Material | Test Description | Sample ID Report Date | Station | Offset | Sample Date | Status |
| | | | | 11 | | 90 |

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EXHIBIT 8-H

